

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Sugiura et al.	Docket:	14974-46922
Serial No.:	TBD	Confirmation No.:	Unassigned
Filed:	September 23, 2004	Group Art Unit:	Unassigned
		Examiner:	Unassigned
Title:	<i>Olefinic Thermoplastic Elastomer and Moldings Thereof</i>		

Amendments to the Specification

- (1) On page 1, please delete the heading "SPECIFICATION."
- (2) On page 1, the last paragraph, please amend the publication number of Patent Document 1 "4-48817 (pages 5 to 12)" to --48-26838 (pages 38 to 60)--.
- (3) On page 3, please replace the heading "Disclosure of the Invention" with the following amended heading:

SUMMARY OF THE INVENTION

- (4) On page 3, please replace the heading "Best Mode for Carrying Out the Invention" with the following amended heading:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-14. (Cancelled)

15. (New) An olefinic thermoplastic elastomer obtained by melting and kneading ingredients, the ingredients including:

a graft copolymer composed of either one of an olefin polymer segment or an olefin copolymer segment, said segments formed from a nonpolar α -olefin monomer, and a vinyl copolymer segment, with particles of one segment being dispersed in the other segment, the particles having a diameter of 0.01 to 1 μm ;

an acrylic rubber formed from a monomer mixture in which 10 to 90 wt% of methoxyethyl acrylate, 5 to 85 wt% of alkyl acrylate, 5 to 15 wt% of acrylonitrile, and 0.1 to 10 wt% of allyl methacrylate are contained as main ingredients;

0.01 to 10 wt% of a crosslinking agent with respect to the total amount of the graft copolymer and the acrylic rubber; and

0.01 to 10 wt% of a co-crosslinking agent with respect to the total amount of the graft copolymer and the acrylic rubber.

16. (New) The olefinic thermoplastic elastomer according to claim 15, wherein the vinyl copolymer segment has a crosslinkable functional group.

17. (New) The olefinic thermoplastic elastomer according to claim 15, wherein the ratio by weight of the graft copolymer to the acrylic rubber is 95:5 to 5:95.

18. (New) The olefinic thermoplastic elastomer according to claim 15, the ingredient further including an olefin polymer or olefin copolymer formed from a nonpolar α -olefin monomer.

19. (New) The olefinic thermoplastic elastomer according to claim 18, wherein the olefin polymer or olefin copolymer formed from a nonpolar α -olefin monomer is an oil-resistant ethylene-propylene copolymer.

20. (New) The olefinic thermoplastic elastomer according to claim 15, the ingredient further including at least one additive selected from the group consisting of a plasticizer, an extender, a lubricant, and an antioxidant.

21. (New) The olefinic thermoplastic elastomer according to claim 15, the ingredient further including at least one of other thermoplastic resins or rubbers.

22. (New) An olefinic thermoplastic elastomer obtained by melting and kneading ingredients, the ingredients including:

a grafting precursor composed of particles of either of an olefin polymer or an olefin copolymer, the polymers formed from a nonpolar α -olefin monomer, and a copolymer of a vinyl monomer and a radically polymerizable organic peroxide; the copolymer being dispersed in the particles;

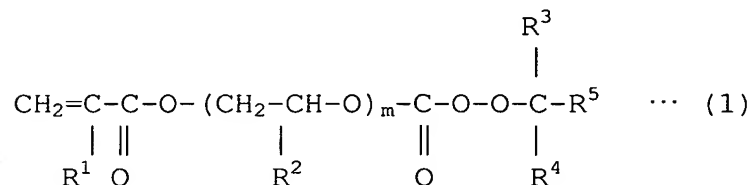
an acrylic rubber formed from a monomer mixture in which 10 to 90 wt% of methoxyethyl acrylate, 5 to 85 wt% of alkyl acrylate, 5 to 15 wt% of acrylonitrile, and 0.1 to 10 wt% of allyl methacrylate are contained as main components;

0.01 to 10 wt% of a crosslinking agent with respect to the total amount of the grafting precursor and the acrylic rubber; and

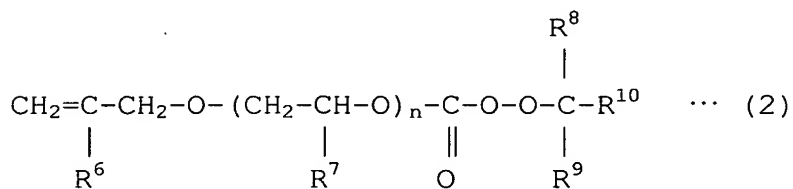
0.01 to 10 wt% of a co-crosslinking agent with respect to the total amount of the grafting precursor and the acrylic rubber.

23. (New) The olefinic thermoplastic elastomer according to claim 22, wherein the grafting precursor is obtained by immersing the vinyl monomer, the radically polymerizable organic peroxide, and a radical polymerization initiator in the particles of the polymer and copolymerizing the vinyl monomer and the radically polymerizable organic peroxide.

24. (New) The olefinic thermoplastic elastomer according to claim 22, wherein the radically polymerizable organic peroxide is a compound represented by the formula (1) or (2):



wherein R^1 represents hydrogen atom or a C_1 to C_2 alkyl group, R^2 represents hydrogen atom or methyl group, R^3 and R^4 independently represent a C_1 to C_4 alkyl group, R^5 represents a C_1 to C_{12} alkyl group, a phenyl group, an alkyl-substituted phenyl group, or a C_3 to C_{12} cycloalkyl group, and m is an integer of 1 or 2; and



wherein R^6 represents hydrogen atom or a C_1 to C_4 alkyl group, R^7 represents hydrogen atom or methyl group, R^8 and R^9 independently represent a C_1 to C_4 alkyl group, R^{10} represents a C_1 to C_{12} alkyl group, a phenyl group, an alkyl-substituted phenyl group, or a C_3 to C_{12} cycloalkyl group, and n is an integer of 0, 1, or 2.

25. (New) The olefinic thermoplastic elastomer according to claim 22, wherein the copolymer of a vinyl monomer and a radically polymerizable organic peroxide has a crosslinkable functional group.

26. (New) The olefinic thermoplastic elastomer according to claim 22, wherein the ratio by weight of the grafting precursor to the acrylic rubber is 95:5 to 5:95.

27. (New) The olefinic thermoplastic elastomer according to claim 22, the ingredient further including an olefin polymer or olefin copolymer formed from a nonpolar α -olefin monomer.

28. (New) The olefinic thermoplastic elastomer according to claim 27, wherein the olefin polymer or olefin copolymer formed from a nonpolar α -olefin monomer is an oil-resistant ethylene-propylene copolymer.

29. (New) The olefinic thermoplastic elastomer according to claim 22, the ingredient further including at least one additive selected from the group consisting of a plasticizer, an extender, a lubricant, and an antioxidant.

30. (New) The olefinic thermoplastic elastomer according to claim 22, the ingredient further including at least one of other thermoplastic resins or rubbers.

31. (New) A molding obtained by molding an olefinic thermoplastic elastomer obtained by melting and kneading ingredients, the ingredients including:

a graft copolymer composed of either one of an olefin polymer segment or an olefin copolymer segment, said segments formed from a nonpolar α -olefin monomer, and a vinyl copolymer

segment, with particles of one segment being dispersed in the other segment, the particles having a diameter of 0.01 to 1 μm ;

an acrylic rubber formed from a monomer mixture in which 10 to 90 wt% of methoxyethyl acrylate, 5 to 85 wt% of alkyl acrylate, 5 to 15 wt% of acrylonitrile, and 0.1 to 10 wt% of allyl methacrylate are contained as main ingredients;

0.01 to 10 wt% of a crosslinking agent with respect to the total amount of the graft copolymer and the acrylic rubber; and

0.01 to 10 wt% of a co-crosslinking agent with respect to the total amount of the graft copolymer and the acrylic rubber.

32. (New) The molding according to claim 31, wherein the molding is a hose or a seal.

33. (New) A molding obtained by molding an olefinic thermoplastic elastomer obtained by melting and kneading ingredients, the ingredients including:

a grafting precursor composed of particles of either of an olefin polymer or an olefin copolymer, the polymers being formed from a nonpolar α -olefin monomer, and a copolymer of a vinyl monomer and a radically polymerizable organic peroxide, the copolymer being dispersed in the particles;

an acrylic rubber formed from a monomer mixture in which 10 to 90 wt% of methoxyethyl acrylate, 5 to 85 wt% of alkyl acrylate, 5 to 15 wt% of acrylonitrile, and 0.1 to 10 wt% of allyl methacrylate are contained as main components;

0.01 to 10 wt% of a crosslinking agent with respect to the total amount of the grafting precursor and the acrylic rubber;

0.01 to 10 wt% of a co-crosslinking agent with respect to the total amount of the grafting precursor and the acrylic rubber.